UNITED STATES CIRCUIT COURT OF APPEALS FOR THE NINTH CIRCUIT.

No. 8876.

PACIFIC MARINE SUPPLY COMPANY AND WEBB PRODUCTS, INC., Appellants,

۷.

THE A. S. BOYLE COMPANY, Appellee.

PETITION FOR REHEARING AND BRIEF IN SUPPORT OF SAME.

GEORGE P. DIKE, CEDRIC W. PORTER, *for Appellee*.

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JAUL P. O'BRIEN,

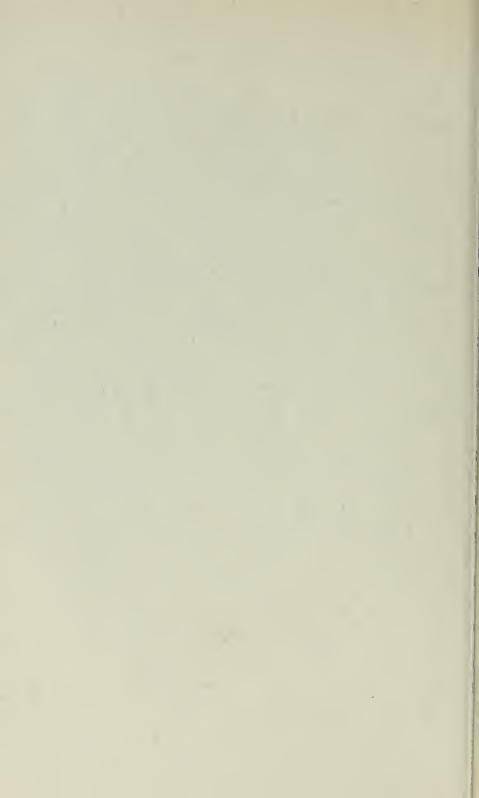


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INITED STATES CIRCUIT COURT OF APPEALS FOR THE NINTH CIRCUIT.

o. 8876.

PACIFIC MARINE SUPPLY COMPANY AND WEBB PRODUCTS, INC., APPELLANTS, *v*. THE A. S. BOYLE COMPANY, APPELLEE.

PETITION FOR REHEARING.

The Plaintiff-Appellee, The A. S. Boyle Company, respectfully quests this Court to grant a rehearing in this case because of the llowing errors in the decision:

I The Court's Fundamental Error was in Failing to Put Itself in the Position of the Man Skilled in the Art Who Had no Knowledge of Griffiths' Invention.

A. Having failed to erase from its mind the knowledge obtained om the Griffiths patent and the ingredients which go to make ciffiths' composition, the Court was able to find in the prior art atents knowledge which would have been lacking to one who had of seen the Griffiths patent. The Court has thus violated its own le laid down in *J. A. Mohr & Son v. Alliance Securities Co.*, 14 (2d) 799 (C. C. A. 9, 1926) wherein Judge Gilbert said (p. 10):

"It is to be borne in mind that the prior art here relied upon consists entirely of patents, and that when it is sought by means of prior patents to ascertain the state of the art, 'nothing can be used except what is disclosed on the face of those patents. They cannot be reconstructed in the light of the invention in suit, and then used as a part of the prior art'. Naylor v. Alsop Process Co., 168 F. 911, 94 C. C. A. 315; Frey v. Marvel Auto Supply Co., 236 F. 916, 150, C. C. A. 178."

B. To show how completely this Court has been misled by its wrong approach, we respectfully call attention to the testimony of Carleton Ellis, the patentee of patent No. 999,490, one of the patents relied on by this Court, who testified in both *Griffiths* v. *Robertson* before Judge Luhring and again in *Boyle* v. *Harris-Thomas* (referred to in the accompanying brief and printed in the Appendix) and candidly expressed his regret and chagrin in not having himself discovered Griffiths' composition when he had been so close to it.

II. Having Adopted a Wrong Approach This Court Gave no Weight to Evidence Which Compels the Conclusion That the Prior Art Had Not Taught the Public What Griffiths Discovered.

(A). The prior art patents do not, in fact, disclose Griffiths' composition.

(B). The following facts prove that the prior art had not taught the public how to make a wood-base putty before Griffiths did so.

(a) There was nothing like plaintiff's "Plastic Wood" on the market before Griffiths' invention.

(b) There was a demand for such material but the public was obliged to continue the use of putty, molten lead, etc., because no material equivalent to Griffiths' wood-base putty was known.

(c) Immediately on appearing on the market the Griffiths' wood-base putty attained a tremendous commercial success.

(d) Griffiths' wood-base putty is capable of useful employment for purposes for which there was previously no available material. (e) The defendant has adopted the formula of the Griffiths' patent and not the formulae of the prior art patents.

(f) Defendant's own witnesses, Webb and Roller, were unable to make without experimentation a satisfactory wood-base putty on the basis of the disclosure of the Pierson prior art patent.

(g) Twenty-five concerns including the defendants, in the same business as the plaintiff, with the same knowledge of the prior art, failed to make a wood-base putty until after Griffiths' composition appeared on the market, and then promptly copied it in practically identical formula in each case.

(h) The prior patentees Pierson, Oblasser, Ellis, Merrick and Thompson also failed to make a wood-base putty, in spite of the demand for such a material, and after working in the same field of cellulose plastics or lacquers.

The foregoing facts not only throw doubt on the sufficiency of the disclosures of the prior art patents so that the Court should have considered the evidence of commercial success, but they prove conclusively, we believe, that Griffiths did something different from previous inventors, that these differences, whether they be small or great, made the difference between success and failure and consequently that Griffiths made an invention and that the patent is valid.

This Court thus failed to be guided by and to apply the usual rules, standards and tests for determining when invention exists which have been laid down by the courts, as embodied in the above facts.

When there has been a complete revolution in commercial practice coincident with an alleged invention covered by a patent the prior art should be scrutinized with unusual care to make certain that it discloses the invention and in case of doubt, the patent should be sustained. The maxim *ut res magis valeat quam pereat* —the Court should seek to uphold rather than to destroy—should have been applied. The Court should have observed the rule laid down by Mr. Justice Bradley in *Loom Co.* v. *Higgins*, 105 U.S. 580 at 591 in a similar situation:

"But it is plain from the evidence, and from the very fact that it [the patented construction] was not sooner adopted and used, that it did not, for years, occur in this light to even the most skilful persons. It may have been under their very eyes, they may almost be said to have stumbled over it; but they certainly failed to see it, to estimate its value, and to bring it into notice. . . .

Now that it has succeeded, it may seem very plain to any one that he could have done it as well. This is often the case with inventions of the greatest merit."

III. The Court Has Failed to Give to the Decisions of Other Courts Upholding the Griffiths Patent the Consideration Which the Rule of Comity Requires.

This patent has been previously sustained in the District of Massachusetts by Judge McLellan in *Boyle* v. *Harris-Thomas*, 18 F. Supp. 177, and by Judge Ford in *Boyle* v. *Siegel*, 26 F. Supp. 217. In each of these cases *all* of the prior art here in question was fully and carefully considered. The patent in suit was also sustained by Judge Thomas in *Boyle* v. *Rose*, District of Connecticut, a contested case, opinion unreported (see decree, Plfs. Exh. 56 Vol. II, p. 47). The Griffiths patent was also granted after suit in the Supreme Court of the District of Columbia (Judge Luhring) and in this case all of the prior art except the Pierson and Oblasser patents was considered.

To the weight of these decisions should be added that derived from the careful consideration given to the case at bar by Judge Cushman in the District Court.

We respectfully submit that this Court—in justice to a highly meritorious and useful invention, should re-examine the question of invention and the disclosures of the prior art. Accordingly, the plaintiff-appellee respectfully requests that this ase be re-heard and that opportunity be given to explain these natters in detail, to the end that the serious mistakes in the opinion may be corrected, and the correct conclusion be adopted as the ecision of the Court.

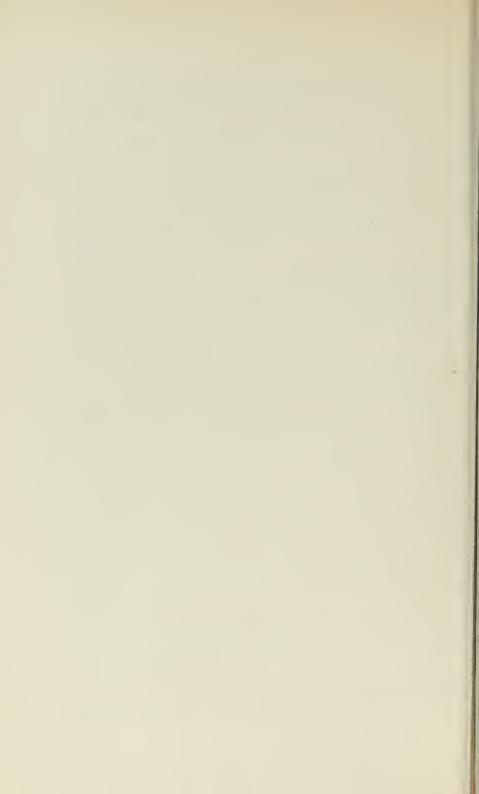
Respectfully submitted,

GEORGE P. DIKE, CEDRIC W. PORTER, for Appellee.

BOSTON, MASS., May 9, 1939.

I certify that this Petition for Rehearing is well founded in law nd fact and that it is not filed for purposes of delay.

GEORGE P. DIKE.



BRIEF IN SUPPORT OF PETITION FOR REHEARING.

In the following pages we point out in detail the evidence and principles of law which have been overlooked and which show that the Court's approach to the case and conclusions were wrong.

I. The Court's Fundamental Error Lay in its Failure to Put Itself in the Position of the Man Skilled in the Art Seeking to Solve Griffiths' Problem and Who Did Not Already Know Griffiths' solution for it.

A. In reaching its conclusion here the Court credits the "man skilled in the art" with an omniscience he does not possess and which is contrary to human experience. What is obvious must, of course, be determined under the conditions of actual industrial life, with the court facing the same problems the engineer faced. Griffiths when sought to solve this problem did not know the answer. This Court, when asked to judge the quality of Griffiths' solution of it, did know the answer. Courts sitting in patent matters, and not fully in touch with the actual conditions of industrial life, may fall into this error and therefore must guard continuously against exercising *ex post facto* judgment, wisdom after the fact, or hindsight, and avoid crediting the man "skilled in the art" with a skill he did not, in fact, possess.

We call attention to the following authorities on the necessity for divesting the mind of after-acquired knowledge in approaching a patent case:

"In ascertaining whether the differences between the device in question and the prior art are such as would have spontaneously occurred to a person skilled in the art if he had been faced with the problem solved by the new device, it is exceedingly important for the person deciding the question to make a decided and conscious effort to avoid having his eyes sharpened by the inventor's disclosure. The question of interpreting an alleged anticipating disclosure and of determining whether a certain change amounts to invention must involve foresight, not hindsight."

In Diamond Rubber Co. v. Consolidated Rubber Tire Co., 220 U. S. 428, the Supreme Court, by Mr. Justice McKenna said (at 435):

"Knowledge after the event is always easy and problems once solved present no difficulties, indeed, may be represented as never having had any, and expert witnesses brought forward to show that the new thing which seemed to have eluded the search of the world was always ready at hand and easy to be seen by a merely skillful attention. But the law has other tests of the invention than subtile conjectures of what might have been seen and yet was not."

In Pelton Water Wheel Co. v. Doble, 190 F. 760 (C. C. A. 911) this Court by Judge Gilbert said (at 764) :

"While it seems a very simple matter to overcome the reactive force of the jet with reference to the governor by changing the plane of the nozzle, the question of the invention involved in a combination of which that is an element should be regarded as it appeared to those who were skilled in the art who were called upon to deal with the problem, rather than in the light of its subsequent solution."

In Lakeshire Cheese Co. v. Shefford Cheese Co., 72 F. (2d) 497 (C. C. A. 7, 1934) Judge FitzHenry said (at 499):

"Whether a patent involves invention is to be determined in the light of historical facts rather than what might appear to be simple in the light of hindsight." See also:

Ideal Stopper Co. v. Crown Cork & Seal Co., 131 F. 244 at 255 (C. C. A. 4, 1904).

Naylor v. Alsop Process Co., 168 F. 911, at 917 and 920, (C. C. A. 8, 1909).

Other cases appear in Appellee's Main Brief pages 42-44.

B. That the Court Has Fallen Into This Fundamental Error Is Shown Conclusively By Its Crediting Ellis, Patentee of No. 999,490, with Disclosing Griffiths' Composition in 1911.

Ellis is one of the outstanding chemists in the United States, beginning his active career in 1902. He has taken out a thousand or more patents in his own name and has written several authoritative treatises. He testified in *The A. S. Boyle Co. v. Harris-Thomas* as follows:

"Q. 28. In connection with that work did it occur to you that you could produce with those materials a substance which would be doughy or putty-like, in the first place, and upon mere exposure to air would harden to substantially the solidity and rigidity of wood?

A. It has been many times a matter of regret to me that the Griffiths idea of a putty-like material which would harden to resemble wood, did not occur to me. Working as I did with materials of this sort, I had everything at hand to produce the composition, except that I lacked the concept of a putty of this type. Unfortunately, I had been brought up, as it were, with the idea that putty must contain no volatile substances. I had worked with and made various putties from linseed oil and the usual mineral matters, such as clay or whiting, and I had supposed that putty must be free from volatile materials. As a matter of fact, had I been asked, at the time, whether it would be possible to make a wood-base putty of this character, undoubtedly, I should have said, very emphatically, no, because I should have regarded any composition containing a high proportion of volatile solvent as totally unfeasible as a putty."

Ellis' testimony in Boyle v. Harris-Thomas and Griffiths v. Robertson is printed in full in the Appendix attached hereto, with the exception of portions dealing with prior art not material in the present case. Because the Ellis patent was not relied on by defendant at the trial as disclosing Griffiths' invention (Roller R. pp. 244-6) there was no reason for presenting Ellis as a witness.

II. The Court was Wrong in Stating That The Prior Art Patents Relied on Disclose Griffiths' Composition. The Proportions of Ingredients Stated In the Prior Art Patents Do Not Produce a Composition Having Griffiths' Properties.

A. *Pierson's* proportions of filler run from 10 to 64% with the resulting product ranging from a thin soupy fluid to a dry mass (Roller Rec. pp. 254 and 259).

The disclosure of the Pierson patent (Rec. p. 72) is only as follows:

"In carbons, etc., take plastic, [nitrocellulose] 1 part; alcohol, 4; ether, 4; charcoal powder, 1 to 16. Lamp black or plumbago may be substituted for the charcoal, sawdust. . . may also be substituted for the charcoal, and oil may often be added to advantage, useful for statuary and moldings . . . and for other purposes".

Pierson did not suggest the use of any particular propositions. Even if we overlook the fact that sawdust is not sufficiently finely divided to be the equivalent of the wood flour called for by the Griffiths patent, that no proportions of wood flour to nitrocellulose and solvent which would produce a doughy, putty-like mass are given, that there is no reference to the initial consistency, *i. e.*, doughy and putty-like, and that there is no reference to the final

consistency (wood-like), who would have known how to make Griffiths' composition from this defective description? This description teaches only those who have knowledge of Griffiths' composition how to perform his invention. Exactly the same statements are true of Oblasser's patents.

Oblasser (Rec. p. 79) describes "an agglomerate" made by mixing a coated liquid with a filler for moulding battery boxes under pressure, probably with the aid of heat. The patent gives no proportions for the ingredients whatever. There is no justification in the record whatever for assuming that this product showed Griffiths' proportions of ingredients and properties or produced Griffiths' results. (See Esselen Rec. p. 310–311.)

Ellis (Rec. p. 71) was not relied on by the defendant at the trial. (See Rec. pp. 244–246.) It appears from Ellis' patent and Ellis' testimony in the Harris-Thomas case, however (Appendix hereto), that in his patent he attempted to make a nitrocellulose or celluloid of reduced inflammability. It was intended to be worked by using hot pressing to shape the material. As Ellis testified, to have made the product doughy and putty-like by the addition of a volatile solvent would have been a great mistake because it would cause bad blistering in the hot moulding process. His final product after hot pressing was flexible, more like leather in general physical qualities.

Merrick (Rec. p. 73) discloses a filler for shoe bottoms. It was *flexible* and not *rigid or wood-like*. (Esselen Rec. p. 308–9.)

The British patent to *Thompson* (Rec. p. 85) discloses merely a thin solution of nitrocellulose of the general type of lacquers.

It is clear beyond question that the prior art patents relied on do not show Griffiths' composition either in proportion or properties. The Court is plainly mistaken on this point.

The Court Was Wrong in Stating That a Man Skilled in the Art Could Tell From the Specifications of Pierson, Oblasser et al., as Readily as From Griffiths' Claims What Proportions of the Named Ingredients Were Needed to Produce Griffiths' Desired Result.

The Court stated that Pierson's and Oblasser's *specifications* were as definite and specific as are *Griffiths' claims* here involved (Opinion pp. 6–7). Here the Court makes an entirely improper comparison between Pierson's and Oblasser's *specification* and Griffiths' *claims*. Griffiths' *specification* gives the detailed proportions and formulae but these are entirely lacking in Pierson and Oblasser's *specifications*. Griffiths' claims are, of course, construed in the light of his specification,* under elementary rules of patent law, and when so construed, sufficiently define his invention. For this purpose Pierson's and Oblasser's *specifications* should have been compared with Griffiths' *specification*, not with Griffiths' *claims*.

The quotation from Appellee's Brief (p. 48), while a correct statement, does not support the Court's conclusion in this respect. The statement was made in reply to Appellee's argument that Griffiths' *claims* were indefinite and functional, within the rule of *General Electric Co.* v. *Wabash*, 304 U. S. 364. But we had previously pointed out (Brief, p. 47):

"Griffiths' *specification* sets forth the specific proportions of the ingredients required in exact formulae. This was not true in Pacz."

^{*} Fuller v. Yentzer, 94 U. S. 288 at 288 (1876).

Seymour v. Osborne, 11 Wall. 516 at 547 (1870).

Railroad Co. v. Mellon, 104 U. S. 112 at 118 (1881).

Carnegie Steel Co. v. Cambria Iron Co. 185 U. S. 403 at 432 (1901).

American Fruit Growers Inc. v. Brogdex Co. 283 U. S. 1 at 6 (1930).

B. Having Adopted the Wrong Approach This Court Gave No Attention to Evidence Which Compels the Conclusion that the Prior Art Had Not Taught the Public What Griffiths Discovered.

The following facts prove that the prior art had not taught the public how to make a wood-base putty before Griffiths did so. This evidence was improperly given no weight. These facts are the standard tests for determining the existence of invention.

(a) There was nothing like plaintiff's "Plastic Wood" on the market before Griffiths' invention. (Main Brief, pp. 18–19.)

(b) There was a demand for such material but the public was obliged to continue to use putty, molten lead, etc. because no material equivalent to Griffiths' wood-base putty was known (Appellee's Main Brief, pp. 18–19).

(c) Immediately on appearing on the market, the Griffiths' woodbase putty attained a tremendous commercial success. (Main Brief, pp. 16–17.)

The Court's opinion said:

"Were the question of novelty a doubtful one, some significance might be attached to the claimed commercial success of appellee's product 'Plastic Wood' manufactured, it is said, in accordance with the Griffiths' patent. This, however, is not a doubtful case."

The Court has misunderstood the purpose for which this evidence was offered. It was offered to show that the patents relied on by the defendant-appellee did not in fact disclose the Griffiths' invention because if the prior art had disclosed the invention these patents would have had an effect commercially.

The Court has thus overlooked and arbitrarily rejected evidence that the Griffiths' composition was the result of invention and was not obvious. The record is barren of any evidence that appellee's tremendous commercial success in "Plastic Wood" can be ascribed to anything except that Griffiths' composition was new, useful and filled a long-felt want. Commercial success should be carefully weighed by the Court and rejected as evidence of invention when it is in fact due to extensive advertising, a new fad or change in style, or the development of a new industry which carries with it a host of minor improvements, as in the *Talking Picture Patents* cases.* But this is not the case here. There is no suggestion of anything of that sort in this record. Tremendous commercial success here indisputably establishes that the Griffiths' composition was not obvious and amounted to invention. This evidence ought not to be ignored. The authorities appear in Appellee's Main Brief (pp. 17–18).

(d) Griffiths' wood-base putty is capable of useful employment and purposes for which there was previously no available material (Main Brief, pp. 19–20).

(e) The defendant has adopted the formula of the Griffiths' patent and not the formulae of the prior art patents.

As Judge Parker said in *Hartford-Empire Company* v. Swindell Bros., Inc., 99 F. (2d) 61 (C. C. A. 4, 1938), at (p. 63):

"Nothing can obscure the fact that the result of the invention embodied in plaintiff's structure has been to revolutionize the art with respect to annealing the type of glassware produced by automatic forming machines; and it is the lehr of this invention which defendants are manufacturing, not the old unit lehr of the prior art which had failed."

Other cases are cited in Appellee's Main Brief page 26.

(f) Defendant's own witnesses, Webb and Roller, were unable to make a satisfactory wood-base putty on the basis of Pierson's disclosure without experimentation.

The Court violated its own rule that a prior art patent to be effective as an anticipation must describe the invention in such

^{*} Paramount Publix Corp. v. Am. Tri-Ergon Corp. 294 U.S. 464 at 474–6 (1934).

Altoona Publix Theatres, Inc. v. Am. Tri-Ergon Corp. 294 U.S. 477 at 487–488 (1934).

full, clear and exact terms as to enable any person skilled in the art to practice it without the necessity of making experiments. (Appellee's Main Brief, pp. 30, 37–40).

(g) Twenty-five concerns, including the defendants, in the same business as the plaintiff and with the same knowledge of the prior art, failed to make a wood-base putty until after Griffiths' composition appeared on the market and then promptly copied it in practically identical formula in each case.

If it were true that the prior art patents relied on disclose Griffiths' composition, obviously the defendants and the twentyfive or more concerns in the same business as the plaintiff which have put out practically identical compositions within three or four years after the appearance on the market of plaintiff's "Plastic Wood" would have produced Griffiths' composition long before Silbersack testified as to this copying by competitors (Rec. pp. 172–173). (Main Brief, p. 26.)

(h) Pierson, Oblasser, Ellis, Merrick and Thompson also failed to make a wood-base putty in spite of the demand for such a material and after working in the same field of cellulose plastics or lacquers.

The great success of plaintiff's "Plastic Wood" and the wide copying of it by plaintiff's competitors after "Plastic Wood" appeared on the market shows a great demand for an article of this nature. That demand would have been supplied long ago by the prior art researches if in fact the Griffiths' composition were obvious (Main Brief, pp. 32, 40–42).

C. The Court Failed to Give to the Decisions of Other Courts Upholding Griffiths' Patent the Weight Which the Rule of Comity Requires.

Five able and experienced patent Judges in five different cases have held the Griffiths' patent valid on practically the same evidence as was before this Court. Their decisions were given no weight whatever. We respectfully submit that the rule of comity^{*} requires that this Court should re-examine its approach to this case.

These undisputed facts require the Court not to hold the Griffiths' patent invalid except on the clearest, most conclusive and convincing evidence. Such evidence was entirely lacking in this case.

The Court has stricken down a useful and meritorious invention which has benefited the public and many diverse industries and occupations. It has done so on grounds not supported by the evidence, and contrary to the settled rules of patent law. It has unnecessarily destroyed a valuable property right, contrary to the time-honored principle of law expressed by the maxim *ut res magis valeat quam pereat.***

The fact can not be disputed that it was Griffiths not Pierson, Oblasser, Ellis, Merrick or Thompson, who solved this difficult problem and gave this new product to the public. Ellis has expressly admitted he did not discover it. The result is that a plaintiff whose initiative and industry has given the public this new and useful product is deprived of the just reward granted to it by the patent laws. The defendants, who gave nothing to the public in research and new discovery, are benefited and allowed to reap where they have not sown.

We feel certain that the Court will desire to correct a decision

** In Turrill v. The Michigan Southern Etc., Railroad Co. 1 Wall. 491 (1863) Mr. Justice Clifford said (p. 510):

"Patents for inventions are not to be treated as mere monopolies, and, therefore, odious in the eyes of the law; but they are to receive a liberal construction, and under the fair application of the rule, ut res magis valeat quam pereat, are, if practicable, to be so interpreted as to uphold and not to destroy the right of the inventor. (*Ryan* v. *Goodwin*, 3 Sum. C. C. R. 520)."

See also:

Rubber Co. v. Goodyear, 9 Wall. 788 at 795 (1869). Eibel Process Co. v. Minnesota & Ontario Paper Co. 261 U. S. 45 at 63 (1922). Hartford Empire Co. v. Swindell Bros. Inc. 96 F. (2d) 227 at 230, (C. C. A. 4, 1938). On reheating, 99 F. (2d) 61.

^{*} Mast Foos v. Stover, 177 U. S. 485 at 488-9 (1899).

which reaches so unjust a result. We, therefore, respectfully request this Court to grant a rehearing in this case.

Respectfully submitted,

GEORGE P. DIKE, CEDRIC W. PORTER,

for Appellee.

BOSTON, MASS., May 9, 1939.

APPENDIX.

UNITED STATES DISTRICT COURT FOR THE DISTRICT OF MASSACHUSETTS.

THE A. S. BOYLE COMPANY, PLAINTIFF,

v.

HARRIS-THOMAS COMPANY AND LOW SUPPLY COMPANY, DEFENDANTS.

Appearances:

Messrs. DIKE, CALVER & GRAY (CEDRIC W. PORTER, Esq., for plaintiff).

(ELLIS SPEAR, Esq., for defendants).

DEPOSITION OF CARLETON ELLIS.

Deposition, de bene esse of Carleton Ellis, Esq., of Montclair, New Jersey, under the provision of a statute of the United States, Title 28, U. S. Code, section 639–641, before William H. Osborne, Jr., a Notary Public, at the offices of Messrs. Pitney, Hardin & Skinner, 744 Broad Street, Newark, New Jersey, on Thursday, January 2nd, 1936, beginning at 10:30 A. M., pursuant to notice duly given December 24, 1935; Cedric W. Porter for the plaintiff; No one appearing for the defendants.

CARLETON ELLIS being duly sworn according to law on his oath, testified as follows:

Direct Examination by Mr. PORTER.

Q. 1. You are Carleton Ellis of Montclair, New Jersey? A. Yes. Q. 2. What is your age and occupation? A. Age, fifty-nine years; occupation, industrial research chemist.

Q.3. Did you originally plan to testify in open court in this case? A. I did, but the date of trial happened to coincide with a trip which I had long planned and that would take me out of the United States.

Q.4. When are you leaving the United States? A. I am leav-

ng Montclair, New Jersey, starting on this trip January tenth, 1936.

Q.5. And returning? A. Probably shall return by the middle or latter part of March, 1936. My trip takes me to the Bahama Islands.

Q.6. In what have you specialized particularly? A. For very many years I have devoted my time almost exclusively to industrial research in the field of synthetic resins, nitrocellulose lacquers and other lacquers, paints, varnishes and analogous coating compositions.

Q.7. Will you state, briefly, your education, training and business experience. A. I was graduated from the Massachusetts Institute of Technology in the year 1900, and in the fall of that year went back to the Institute to serve in the chemical department on the instructing staff. At the end of two years I opened a laboratory as a research and consulting chemist, working on and specializing in particularly the field of varnishes and coating compositions.

I operate a large research laboratory at Montclair, New Jersey, which is busied, for the most part, with the development of synthetic resins, plastics and coating compositions.

Q.8. What is the name of that laboratory? A. The name of the laboratory is Ellis Laboratories of Montclair, New Jersey.

Q.9. How many employees? A. How many employees? The staff varies, from time to time, but there are, probably, at the present time, between fifteen and twenty employees. Many of these are highly trained chemists, seven of them having the title of Phd., Doctors of Philosophy.

Q. 10. Will you state, briefly, some of your connections as consulting chemist. A. As a consulting chemist I am retained by the Standard Oil of New Jersey in the field of petroleum and similar mineral oils. I am also retained by the Proctor & Gamble Company of Cincinnati, Ohio, in connection with soaps and vegetable oils, shortenings and fatty food products. Also, I am a consultant to the American Cyanamide Company; particularly, however, to a subsidiary company, controlled by the firm mentioned and known as the Rezyl Corporation.

Q. 11. Which makes— A. This concern manufactures a large number of synthetic resins known as rezyls, sold to the paint and varnish trade to make varnishes and lacquers. Another connection is with the Unyte Corporation, of New York City, manufacturing urea formaldehyde, synthetic resins and converting them into molding compositions, which are extensively used throughout the United States.

Q. 12. Have you made any inventions in this field and taken out

letters patent thereon? If so, state approximately how many patents and in general to what they relate? *A*. My work in the field of industrial research chemistry has led to many inventions which have formed the basis of a series of patents, which patents may number a thousand or more. Most of these relate to resins, lacquers and other nitrocellulose compositions, paints, varnishes, and the like.

Q. 13. Have you written any treatises on the subject of your investigation? A. Whenever I become deeply interested in a subject of research, I make a point to collect the literature on that subject as completely as possible and have felt, after a time, that it was my duty to assemble such material in book form for the convenience of use by other chemists. This led me to publish a number of books on technical subjects, relating largely to the field of oils and resins. One of the first books that I brought out was on Hydrogenation of oils, published by A. Van Nostrand, New York, and has gone to three editions, being revised and enlarged for each successive edition. In 1923 I brought out a volume entitled, "Synthetic Resins and their Plastics".

Q. 14. Published by— A. Published by the Chemical Catalog Company of New York. And it has had a very extensive sale throughout the world and, as a result, the publishers asked me if I would not get out a new edition. Owing to the great activity in this field, the preparation of manuscript of a new edition has taken considerable time. The revision was started in 1932 and the second edition has just been published, bearing the new title, "The Chemistry of Synthetic Resins". The publisher is Reinhold Publishing Corporation, successor to the Chemical Catalog Company The first edition of "Synthetic Resins" was a volume of about five hundred pages. The new edition is a two-volume set of over sixteen hundred pages.

My interest in petroleum chemistry also led me to publish a book entitled, "The Chemistry of Petroleum Derivatives". This was brought out in 1934, by the Chemical Catalog Company of New York. It is a volume of nearly thirteen hundred pages.

Q. 15. Are you the patentee of Ellis Patent No. 999,490, dated August 1, 1911, for Cellulose-ester composition? A. Yes, sir.

Q. 16. Will you state, briefly, what that ester composition disclosed in your patent is, what it was made of and what its characteristics are? A. In 1907 I recognized the importance of nitrocellulose and thought of some means to reduce its inflammability. Research indicated that chlorinated compounds helped to reduce the hazard and I finally settled on a compound, produced by the reaction of chloral with caster oil, which I incorporated with nitro cellulose. The purpose of this work was to make a celluloid of

reduced inflammability. A product was made which did have the characteristics of celluloid and which could be molded and shaped as celluloid is and although somewhat less inflammable than ordinary celluloid, had a tendency to become acid and also was most costly compared with camphor, ordinarily used in making celluloid, in conjunction with nitrocellulose.

Q. 17. Do I understand correctly that your cellulose-ester composition was like celluloid? A. It was very much like celluloid and had to be worked in the same way by using a hot pressing to shape the material as celluloid is shaped.

Q. 18. Could this composition of yours have been used satisfactorily for the purpose of filling holes or cracks in wood, much in the same manner as putty is used? A. The composition could not by any means have been used satisfactorily as a putty. One of the fillers which I have mentioned in the patent noted is wood flour, but I found that the latter material stimulated the development of acid so that the composition degenerated on standing and also that the acidity, probably due to development of hydrochloric acid, attacked metal parts. For various reasons the composition could not have been used successfully as a putty.

Q. 19. What was the purpose of the addition of the various fillers you mentioned, such as wood flour, in your composition? A. The purpose was two-fold: First, as indicated, I was trying to make a less inflammable celluloid, and, second, I wanted to make it as cheaply as possible. Hence, I found it expedient to try a number of fillers, thinking that these would reduce inflammability and also cheapening the product. The fillers, therefore, were used essentially as baulking or extending agents.

Q. 20. Was your wood flour filler used to give your composition a wood-like appearance of composition? A. That was not the purpose. I tested wood flour as a cheapening and baulking agent, recognizing, of course, that I must not sacrifice the essential appearance of the celluloid-like molded article, which I was seeking to make.

Q. 21. Was your composition a doughy, putty-like, plastic composition, when it was to be used for molding purposes? A. It was not of this character, but more of a powder or metal, which was quite dry, as necessarily had to be the case for hot pressing. The presence of any volatile solvent in hot pressing articles is extremely inimical to the production of a good surface. Therefore, in making molding composition, we always eliminate any volatile solvent for moisture, as completely as possible. Otherwise blistering of the molded article would result, causing its rejection. I did try, according to my patent No. 999,490, the employment of various volatile solvents to assist in making my celluloid in better blended form.

The blended solvents were used in a very limited way for the purpose of incorporation, and then these solvents had to be expelled by heating and drying to prepare the composition for hot pressing.

Q.22. Did the hot pressing render your composition plastic? A. Yes.

Q. 23. That was the way it was molded? A. That was the way it was molded, yes.

Q. 24. Did you intend your celluloid composition to be doughy, and putty-like for the purposes of your patent? A. No, it would have been a great mistake for the purposes of the patent to have used the material in a putty-like form at ordinary temperatures. This would mean that some solvent was present which created the softness necessary to give a putty-like body. As stated above, the presence of volatile solvents in celluloid or in any other molding composition is highly unfavorable to the production of a good molded specimen, since that solvent will cause bad blistering and the molded article will be rejected.

Q.25. Would your composition harden upon mere exposure to air to substantially the solidity and rigidity of wood? A. No, it would not do this, because, primarily, I was seeking to produce a type of celluloid which had to be flexible, or more like leather in general physical qualities.

Q. 26. Was your composition a commercial success? A. The work did not turn out commercially successful, owing, in part, to the high cost of the chloral compound, and also to the slight acidity developed in the composition on standing.

Q. 27. Did you abandon the use of this composition? A. Yes.

Q. 28. In connection with that work did it occur to you that you could produce with those materials a substance which would be doughy or putty-like, in the first place, and upon mere exposure to air would harden to substantially the solidity and rigidity of wood? A. It has been many times a matter of regret to me that the Griffith's idea of a putty-like material which would harden to resemble wood, did not occur to me. Working as I did with materials of this sort. I had everything at hand to produce the composition, except that I lacked the concept of a putty of this type. Unfortunately, I had been brought up, as it were, with the idea that putty must contain no volatile substances. I had worked with and made various putties from linseed oil and the usual mineral matters, such as clay or whiting, and I had supposed that putty must be free from volatile materials. As a matter of fact, had I been asked, at the time, whether it would be possible to make a wood-base putty of this character, undoubtedly, I should have said, very emphatically, no, because I should have regarded any composition containing a high proportion of volatile solvent as totally unfeasible as a putty.

Q. 29. Are you familiar with the plastic composition described in the Griffith patent in suit, No. 1838618? A. I am.

Q.30. Would this Griffith composition, have served the purposes of, or do the work intended by, your composition disclosed in the Ellis patent, we have been talking about? A. The Griffith's composition would not have been satisfactory for that purpose because of its makeup, which would be such that a celluloid-like surface could not be secured, but, in all probability, merely a hopelessly blistered article.

Q.31. Have you given testimony, before, in litigation involving the Griffith patent application? A. Yes. I testified regarding the character and nature of the Griffith plastic composition, in 1931, in a suit brought in the Supreme Court of the District of Columbia, to compel the issuance of a patent to Griffith.

Q. 32. By reason of that suit and your previous testimony, have you become familiar with the nine patents which were cited by the patent office as references against the Griffith application? *A*. Those patents are patents to Hyatt and Black, No. 89582; Reagles, 311203; Ellis, 999,490; Merrick, 1,203,229; Black, 1,294,355; Hinze, 1,594,521; Graul, 1,652,363; the British patent to Bulling and Rees, No. 169,177, of 1922; and the British patent to Mennon, No. 2775 of 1860.

I am familiar with the disclosures of these patents, in a general way.

Q.33. Now, taking into consideration the knowledge which is given by those patents and assuming that you had that information on November 17, 1923, which is the filing date of the Griffiths' patent in suit, and assuming that you had the ordinary information that was available to a person skilled in the art of making nitrocellulose compounds, at that time, and knowing that there was a demand for such substances as putty, shellac, sawdust, melted lead, and the like, to fill up holes in wood, would, in your opinion, the patents that I have referred to, have suggested to you the desirability of a wood-base putty or grainless wood or how to make it? A. I do not find any disclosure in these patents which would suggest the idea of a grainless wood putty or how such a product should be made.

Q.34. Do you find, among those patents, anything that teaches you how to make a grainless wood putty, which is, at first, doughy and plastic and then which dries on mere exposure to air to substantially the rigidity and solidity of wood? A. I do not find any disclosures in these patents which even suggest such a product.... DISTRICT OF NEW JERSEY,

COUNTY OF ESSEX, SS:

I, William H. Osborne, Jr., a Notary Public of the State of New Jersey, do hereby certify that on the 2nd day of January, 1936, between the hours of 10:30 and 12:00 in the forenoon, at the office of Pitney, Hardin, & Skinner, 744 Broad Street in the City of Newark, County of Essex and State of New Jersey, pursuant to the notice hereto annexed, which was issued and served in the cause depending in the United States District Court for the District of Massachusetts wherein the A.S. Boyle Company is plaintiff and Harris-Thomas Company and Low Supply Company are defendants, in Equity No. 4091, I was attended by Carleton Ellis, the witness named in said notice, and Cedric W. Porter, of Dike, Calver & Gray, as counsel for the plaintiff, no one appearing on behalf of the defendant, and the said Carleton Ellis being by me first duly cautioned and sworn to testify the truth, the whole truth and nothing but the truth concerning the matters in controversy in said suit, and being carefully examined, deposed and said as in the foregoing annexed deposition set out.

I do further certify that said deposition was taken stenographically and was then and there reduced to typewriting by Roger E. Salmon, an official court reporter in the State of New Jersey, under my personal supervision, and after it had been reduced to typewriting was read over by the said witness, after which it was subscribed by the witness, and the same has been retained by me for the purpose of sealing up and directing the same to the clerk of the Court as required by law.

I further certify that the reason why the said deposition was taken was that the said witness resides more than one hundred miles from the place of trial, to wit: In the Town of Montclair, County of Essex and State of New Jersey.

I further certify that notice was given to counsel for the defendants of the taking of said deposition, as appears by acknowledgment of service endorsed upon the original notice hereto annexed.

I further certify that I am not of counsel or attorney to any of the parties nor am I related by blood or marriage to any of them, nor am I interested directly or indirectly in the event of the cause.

I further certify that the fee for taking said deposition, the sum of \$22.00, has been paid to me by the plaintiff and the same is just and reasonable.

Witness my hand and official seal this 8th day of January, 1936.

WM. H. OSBORNE, JR.

Notary Public of New Jersey.

[SEAL]

IN THE SUPREME COURT OF THE DISTRICT OF COLUMBIA.

In Equity No. 50,185.

MANFRED E. GRIFFITHS, ET AL., PLAINTIFFS,

v.

THOMAS E. ROBERTSON, COMMISSIONER OF PATENTS, Defendant.

Washington, D. C., Wednesday, May 27, 1931.

The above-entitled matter came on for hearing before Mr. Justice O. R. Luhring at 10 o'clock A. M.

Present:

On behalf of the Plaintiffs: George P. Dike, Esq., and A. V. Cushman, Esq.

On behalf of the Defendant: T. A. Hostetler, Esq.

CARLETON ELLIS

was thereupon produced as a witness for and on behalf of the Plaintiffs; and, having been first duly sworn, was examined and testified as follows:

Direct Examination by Mr. DIKE.

Q. What is your name? A. Carleton Ellis.

Q. Your age? A. Fifty-five.

Q. Residence and occupation? *A*. Residence, Montclair, N. J.; occupation, research chemist and consultant to a few concerns.

Q. In what have you specialized particularly? A. Since 1900 I have specialized very largely in plastics, including that of cellulose in its various forms, coating compositions, oils and the like.

Q. Very shortly what is your education, training and experience? A. I was graduated from the Massachusetts Institute of Technology in the chemistry course in 1900 and remained two years with the Massachusetts Institute of Technology, on the instructing staff in the chemical department. Then I became a consultant and have been following research chemistry and consulting work ever since. I am consultant to a number of large concerns, including the Standard Oil Company of New Jersey, and I serve as a member of the Chemical Committee of that company.

Q. Have you ever written at all on the subject of plastics? A.

I have prepared a treatise on the subject of plastics, which I believe is considered authoritative. I have also published various papers.

The Court: What is the title of this treatise?

The Witness: Synthetic Rosins and Other Plastics, published in 1923, by the Van Nostrand Company of New York.

Q. (By Mr. Dike) : You are the patentee of patent No. 999,490, dated August 1, 1911, for a cellulose ester composition, Defendant's Exhibit C? A. Yes.

Q. Will you state shortly what that ester cellulose composition is, what it was made for, and what its characteristics are? A. It was my object in 1907 to try to reduce the inflammability of nitrocellulose, and I sought for some compound to mix with it which would reduce the inflammability more or less. I found that by treating castor oil with chloral I had a softening agent for nitrocellulose which would reduce the inflammability. I attempted to make a composition which I could mold into various shapes by hot pressure in the same manner that celluloid is shaped under present practice. In the course of that work I tested the effects of certain fillers, and among these was wood flour.

I found to my surprise, however, that wood flour tended to render the composition acid through some obscure reaction, and that such compositions would affect metals, corroding them, not greatly but sufficient to be objectionable.

In the course of that work I also employed certain solvents to obtain a better blending of the chloral compound in the nitrocellulose, and I mention in the patent that I used acetone and similar volatile solvents. But these were not used for the purpose of making a dough-like composition which would have been inimical to the production of a good plastic.

A plastic which has to be hot pressed should be free from solvent, otherwise blistering occurs. So I attempted to get a granular form of material free from solvents which when hot pressed would give me a product resembling celluloid but with diminished inflammability. This patent was the result of that work.

Q. Was it a success? A. I regret to say it was not a success for several reasons. One was the high cost of the choral compound. One was this difficulty from slight acidity, and various other conditions which arose and made it uncommercial.

Q. So you abandoned it, practically? A. I had to give it up, yes.

Q. In connection with that work did it occur to you that you could produce with those materials a substance which would be doughy or putty-like in the first place and on air hardening would

become wood-like? A. I regret to say that it did not. I should feel myself quite fortunate if I had thought of that idea at the time, because I had materials in front of me with which I could have made the wood base putty of Griffiths. But I did not have the concept that a dough-like material could be made which would harden on drying quickly and serve as a filling material for holes and cracks, and so forth. In fact, if I had been asked at the time whether or not a wood-base putty of this character could have been made in this way, I should have said no, I do not think it could be. I should have regarded it as impracticable. It would not have looked feasible to make anything from a material like wood flour, nitrocellulose and volatile solvents which could be worked like putty.

So I was quite surprised a few years ago when I first ran across his product of Griffiths and worked a little bit with it in my nome to fill up some cracks in a door to discover that it was made from wood flour and nitrocellulose and solvent.

Ordinarily I would have expected at that time that shrinkage would have been so serious a matter that there would have been no true putty-like effect. Ordinary putty made from whiting and linseed oil is a very dense material and has nothing to evaporate; and in the old days we supposed that a putty had to be someching that contained no volatile materials, but Griffiths has demonstrated that putties can be made even though volatile solvents are present.

Q. Are you familiar with the nine patents which were discussed by Dr. Esselen and which are Exhibits A to I, inclusive? A. I know of their general composition.

Q. Now, taking into consideration the knowledge which is given by those patents, and assuming that you had that informaion on November 17, 1923, and the ordinary information that was available to a person skilled in the art of making nitrocellulose compounds at that time, and knowing that there was a demand for such substances as putty, shellac, sawdust, melted lead and the ike to fill up holes in wood, would, in your opinion, the patents hat I have referred to have suggested to you the desirability of wood-base putty or grainless wood, or how to make it? A. They would not have suggested such an idea, nor would they have aught one how to make such a product.

The Court: As a matter of fact, did you not have those patents before you when you were experimenting with your own business? The Witness: I had some of them, to be sure, but not all of them. Most of them are of a later date than my patent.

Q. (By Mr. Dike): They are all before the date in 1923? A. Yes.

Mr. Dike: I used the date 1923, which is the date of the Griffiths application, but Mr. Ellis' patent goes back to 1907 I might add that under the Patent Law a person skilled in the art is theoretically charged with a knowledge of all issued patents.

Q. (By Mr. Dike): Do you find among those patents any that teaches you how to make a grainless wood which is first plastic and doughy-like and then on drying in the air becomes hard like wood? A. I do not.

Mr. Dike: That is all.

Mr. Hostetler: No cross-examination.